



VX OBSERVE

REMOTE MONITORING,
PREDICTIVE MAINTENANCE
& CONTROL ACTIONS

Presented by:



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UNIFYING THE BUILT ENVIRONMENT

Non-Building Infrastructure

Public spaces and walkways like parking and transportation

Man-Made Structures

The buildings themselves

Embedded Building Technology

Building Systems (HVAC, electric, refrigeration, lighting, reservation system)

Industry-Specific Support Infrastructure

Corporate (IT systems, copiers)
Commercial (Ventilation, cranes)
Healthcare (Radiology, MRIs)
Education (Desks, Classroom)

Functional Assets

Heavy machinery, medical devices, lab equipment

Human Support Infrastructure

People who work to support resources (maintenance, administrative, security, facilities)



EVERY STEP OF THE WAY



SMART RETAIL



CONNECTED BUILDING SYSTEMS
Stay connected to crucial building systems like security systems, fire alarms, lifts and escalators with continuous monitoring and alerts

AUTOMATED NOTIFICATIONS
Automated SMS, phone and email alerts allow staff to protect customers and stock in the event of a failure

SITE-WIDE VISIBILITY
Gain big-picture insight into your energy consumption, asset operations and overall portfolio health

REMOTE MONITORING
Remotely increase or decrease refrigeration set points to retain optimum parameters and save energy

SMART ALARMS
Use intelligent alarm triage to cut through the noise and identify real issues

PROACTIVE ASSET MAINTENANCE
Use sensors and real-time data to proactively schedule maintenance and find the right technicians

HEALTH AND SAFETY
Use sensors to optimise traffic flow, identify populated areas and maintain health and safety

PREDICTIVE ANALYTICS
Use vibration monitoring, energy usage analytics and sensors to predict and prevent costly breakdowns

ENERGY MANAGEMENT
Remotely monitor main and sub metering to detect excessive or abnormal energy consumption

AUTOMATED COMPLIANCE TRACKING
Manage refrigeration temperature and asset health to keep food fresh and maintain compliance

Major Top 4 UK Grocery Brand

1,400+ locations
35% drop in work order
80% reduction in bureau
£3M p.a. energy saving

Leading Facilities Management & Professional Services provider

3,000+ Buildings managed
Monitor, Predict & Control

Other Major Top 4 UK Grocery Brand

600,000+ connected assets
2,500+ locations
33% Service Provider saving
£10M Energy Saving

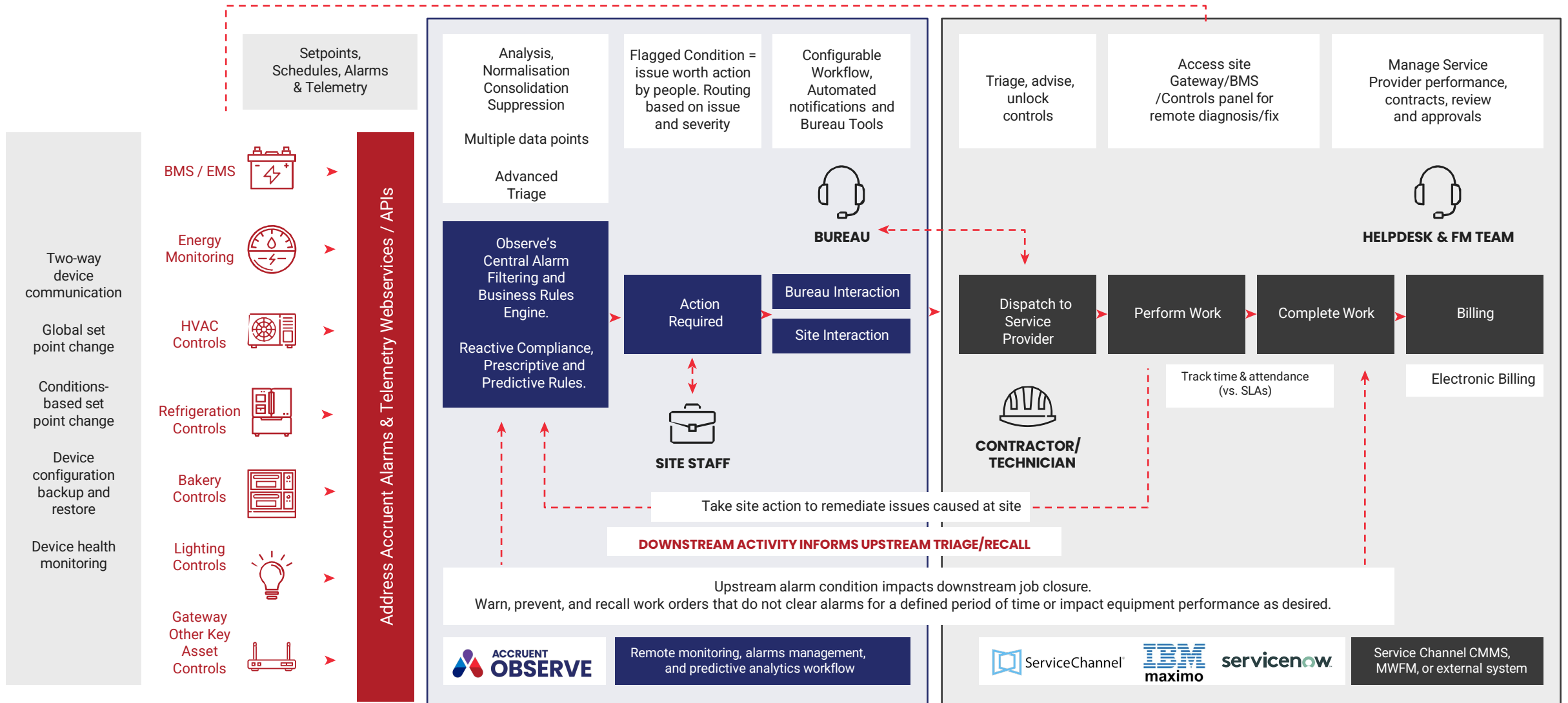


ENTERPRISE INTEGRATIONS



END-TO-END WORKFLOW MANAGEMENT

END-TO-END PROCESS AND WORKFLOW WITH MULTI-PARTY INTERACTION AND VISIBILITY ON COMMON INTEGRATED PLATFORM



SINGLE INTEGRATED SYSTEM, WORKFLOW, PROCESS AND AUDIT TRAIL

CONDITION BASED MONITORING - PREDICTIVE

Refrigerator Failure Prediction Detail

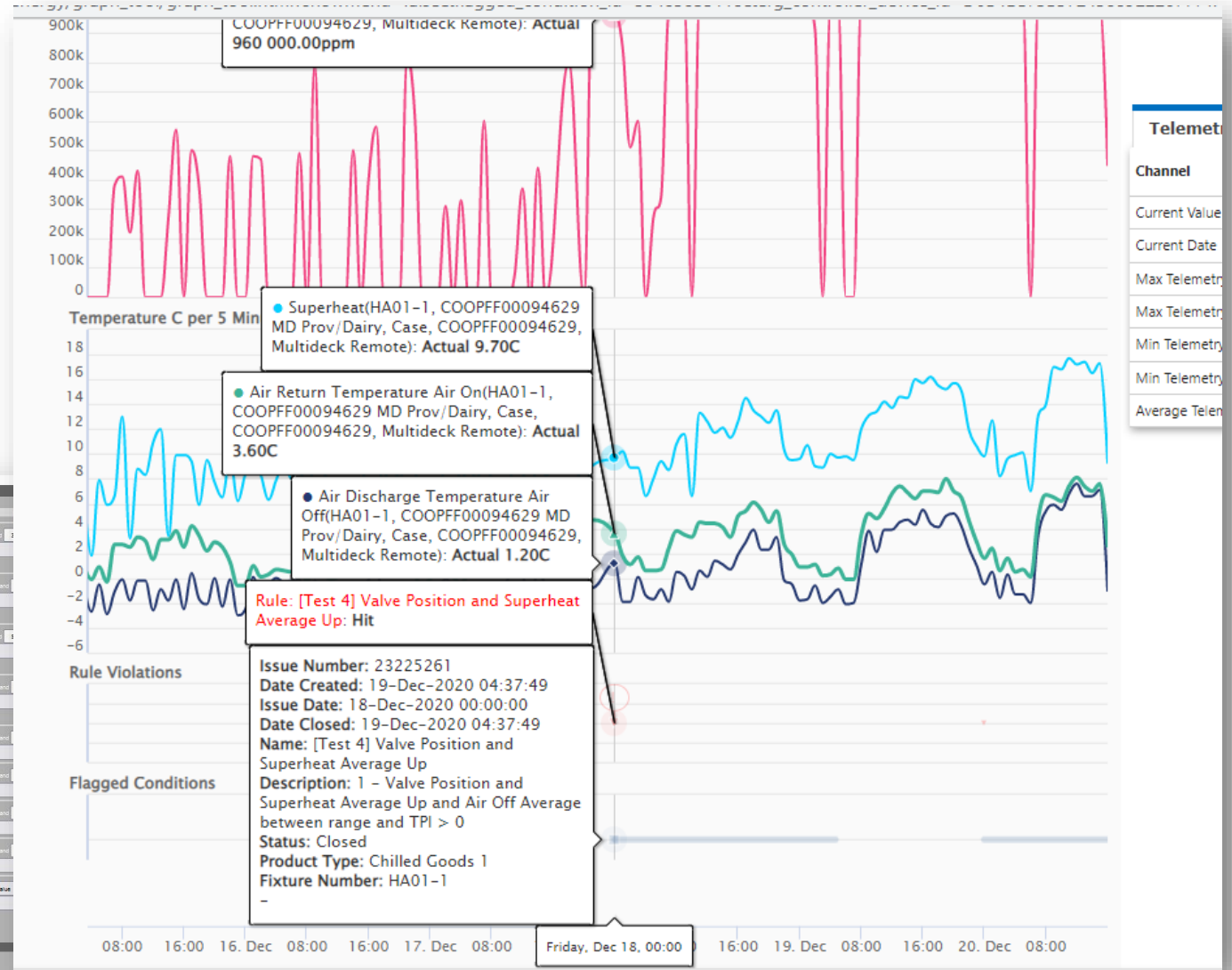
Flagged System Condition Rules

Rule Detail | Alarm Criteria | Telemetry Criteria | Additional Criteria | Site Attributes

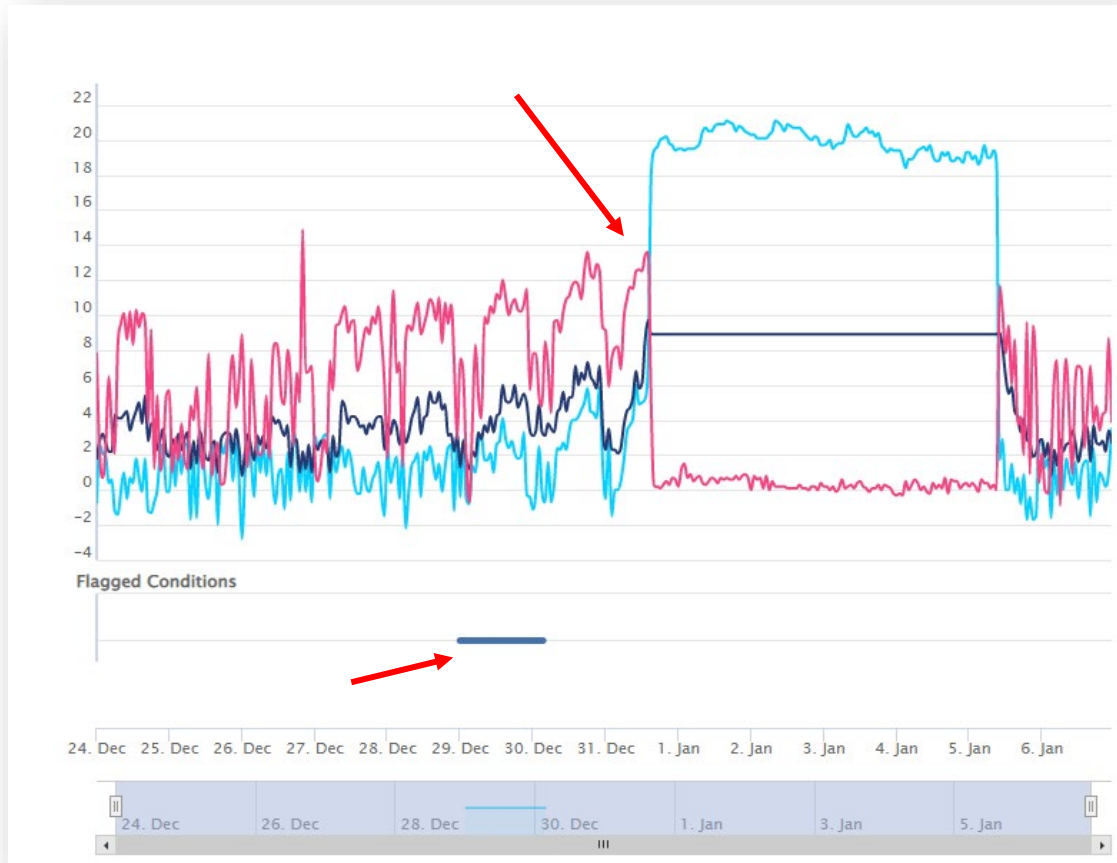
Flagged Condition Name	Refrigerator Failure Prediction
Description	Refrigerator Failure Prediction
Rule Evaluation Type	Delayed Evaluation (Day + 1)
Severity	Low
Email Notification Priority	Normal
Rule Status	Active
Rule Type	Predictive
Rule Category(ies)	<input type="checkbox"/> Energy <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Environmental

Telemetry Criteria

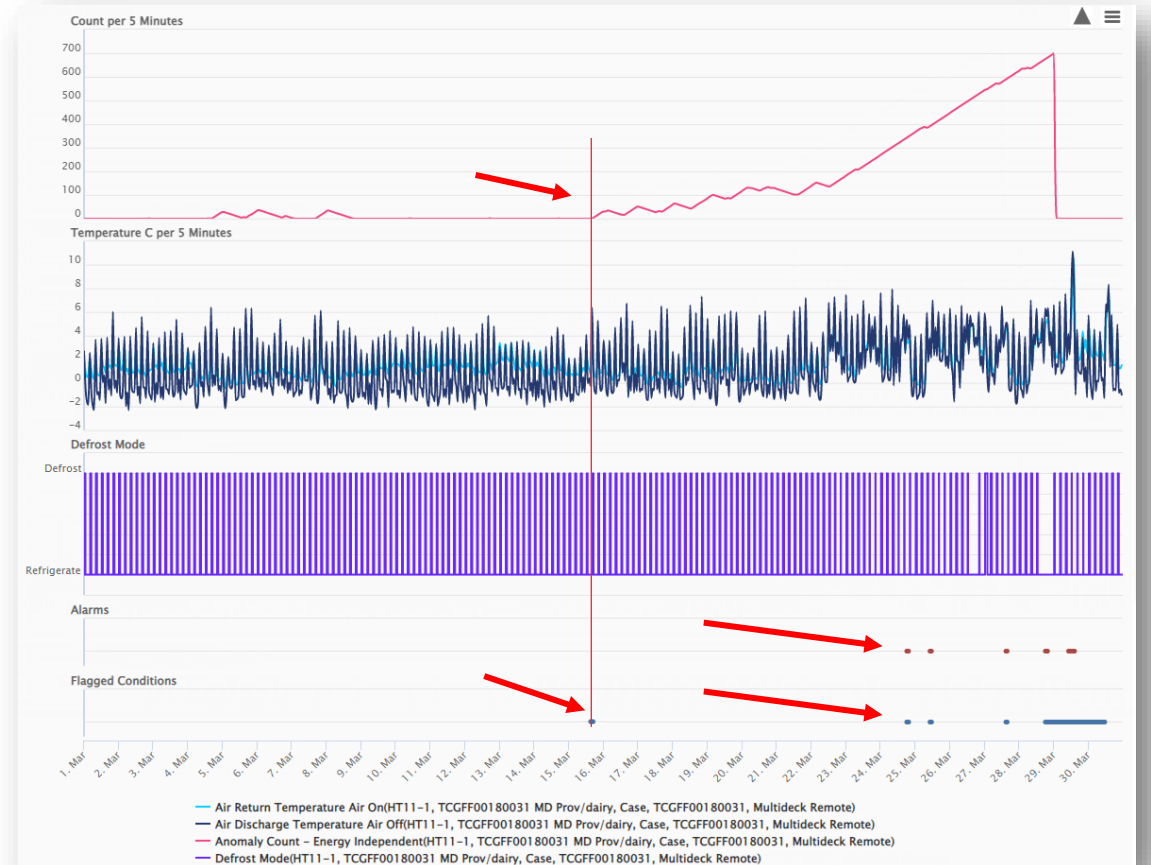
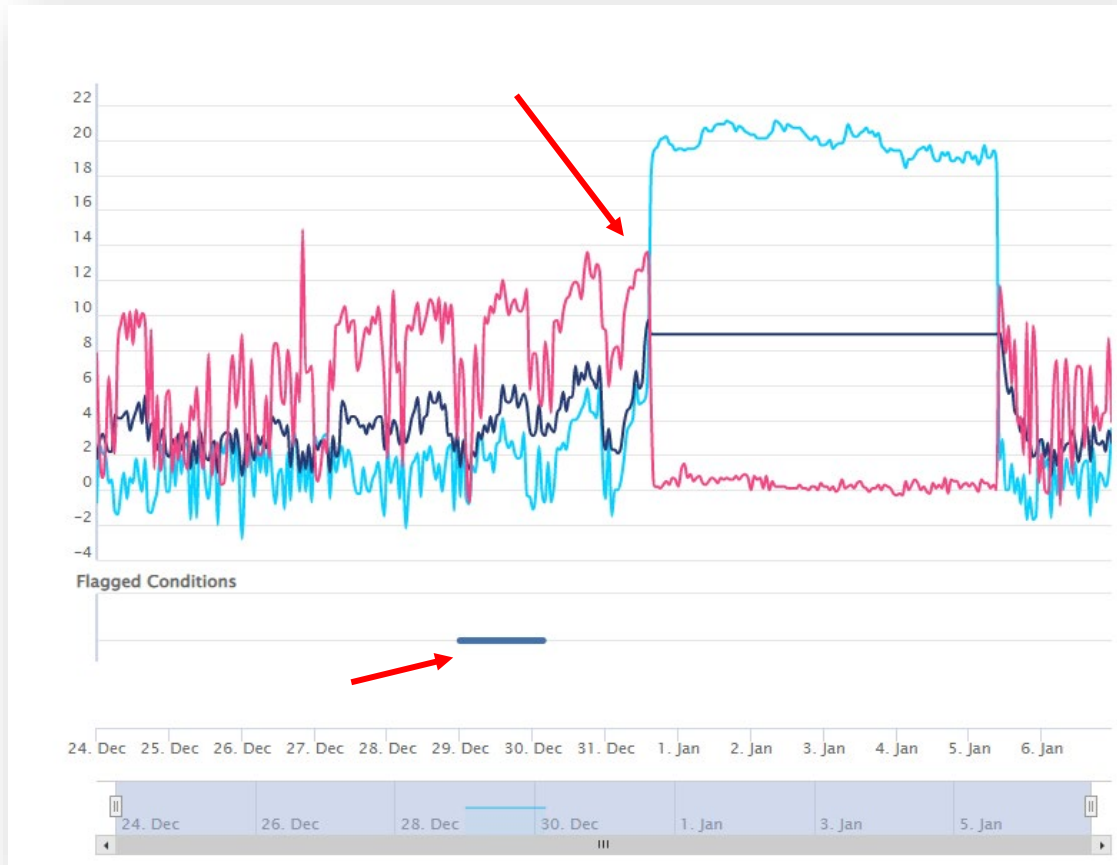
Step	Operand	System Variable (Component)	Offset	Function
1	<=	Valve Position Average (Case)	Self	Between
2	And	Superheat Average (Case)	Same Controller	Between
3	Or	Valve Position Average (Case)	Same Controller	Between
4	And	Superheat Average (Case)	Same Controller	Between
5	And	Air Off Average (Case)	Same Controller	Between
6	And	Air Off Average (Case)	Same Controller	Between
7	And	Air Off Average (Case)	Same Controller	Between
8	And	Air Off Average (Case)	Same Controller	Between
9	And	TPI (Case)	Same Controller	>



CONDITION BASED TO PREDICTIVE



CONDITION BASED TO PREDICTIVE TO ML





THANK YOU



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